Orbiter

Owner's Manual

Cetacea Sound

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Technical Audio for the 21st Century Classroom

OWNER'S MANUAL

For use with the following Orbiter systems.
System No.: ORB-CMD-001 | ORB-CMD-LR001

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Congratulations

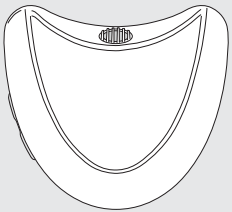
Thank you for purchasing the Orbiter™ Wireless Pendant Microphone system. This system represents the future of classroom soundfield and voice amplification. With its state-of-the-art, 2.4-Ghz RF design, the Orbiter streams stunningly crisp, CD-quality audio for high-fidelity voice amplification. Its secure point-to-point pairing prevents interference between and within rooms. The Orbiter also boasts superior ergonomics for all-day comfort and operational simplicity, a top request from teacher focus groups.

This system includes a 3-channel mixer for additional multimedia connectivity. Many devices like DVD, iPod®, or MP3 players plug directly into the desktop receiver. Please carefully read this guide and other resources mentioned on our website prior to connecting your sound device.

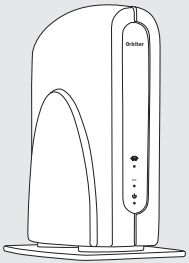
This guide explains how to correctly install and operate the Orbiter wireless microphone system to get the best classroom soundfield and voice amplification experience. Please read this manual carefully before installing your system and keep it in a safe place for quick reference.

SHIPPING KIT CONTENTS

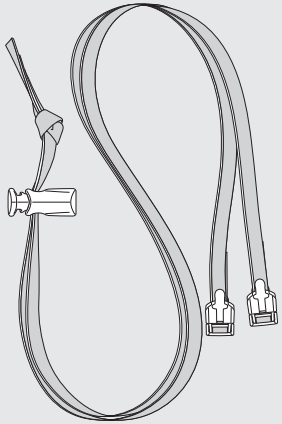
☐ **Orbiter Transmitter**



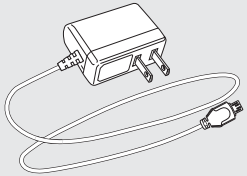
☐ **Orbiter Receiver**



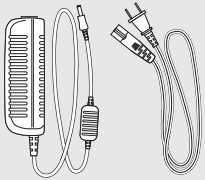
☐ **Lanyard Kit**



☐ **Transmitter Charger**

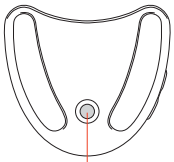


☐ **Receiver Power Supply**

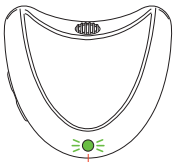


ORBITER UP CLOSE

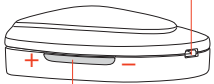
Pendant Transmitter



MASTER CONTROL
ON/OFF/MUTE



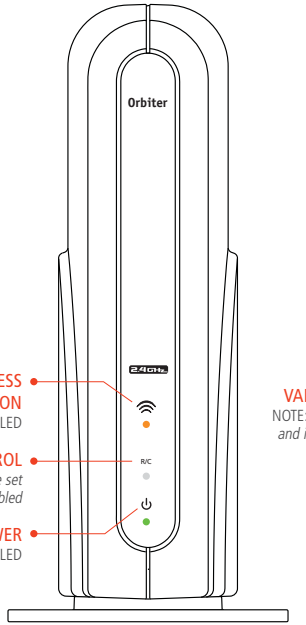
STATUS INDICATOR
Green LED



CHARGER CONNECTOR

VOLUME CONTROL

Desktop Receiver

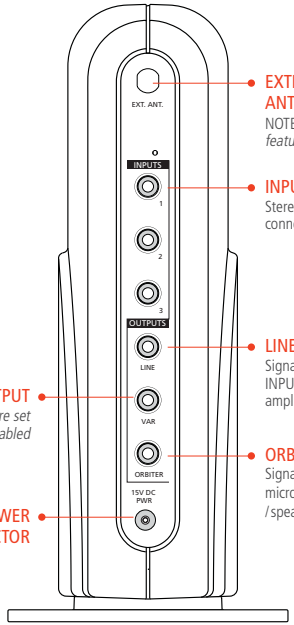


WIRELESS CONNECTION
Amber LED

REMOTE CONTROL
NOTE: *Future feature set and is currently disabled*

POWER
Green LED

Receiver Front



EXTERNAL ANTENNAE
NOTE: *Optional feature*

INPUTS (1, 2, 3)
Stereo/mono source connections

LINE OUTPUT
Signal output for INPUTS (1, 2, 3) to amplifier/speaker

VARIABLE OUTPUT
NOTE: *Future feature set and is currently disabled*

ORBITER OUTPUT
Signal output for Orbiter microphone to amplifier/speaker

DC POWER CONNECTOR

Receiver Back

PLEASE SAVE THE BOXES IN CASE YOU NEED TO RETURN YOUR PRODUCT FOR ANY REASON

INSTALLER NOTES

Input source specifications (receiver)

Stereo Sources

Maximum input voltage should not exceed 300 mV per input channel (1, 2, or 3). Do not use any multi-channel sources like 3-channel, Dolby Digital 5-channel, THX, or QSound.

Mono Sources

Maximum input voltage should not exceed 150 mV per input channel (1, 2, or 3).

IMPORTANT

Use source devices that offer a mono or stereo line output instead of microphone level output.

Line Level Sources

Connect to line-level sources only. Amplified sources may overdrive the system, causing premature failure and a loss in warranty.

In addition, equalizers, bass boost, Surround Sound, QSound, Spatializer, and other compression techniques are not necessary.

Recommended assembly tools

No tools are required to set up the Orbiter other than to run a cable to the speaker/amplifier. The following tools and accessories may be of use depending on your specific installation.

- Clips, hangers, or hooks to run cables
- Screwdriver, Phillips #2
- Ladder to reach ceiling speakers or Astronaut (not included)

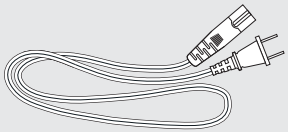
Cetacea Sound speakers

All Cetacea speakers are compatible with the Orbiter HD wireless microphone. Each speaker has its own Quick Start Guide that should be consulted before use.

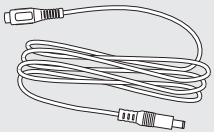
CABLING OPTIONS

Cetacea Sound offers a variety of source and power cabling options to best support your specific installation project. Please ensure that all source and power cables are procured prior to installation. Please visit our website for ordering information.

Power Extension Cables

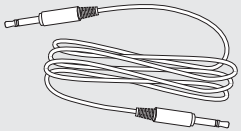


☐ AC Extension Cables
Lengths: 6' | 10' | 20' | 30'

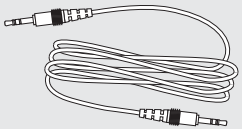


☐ DC Extension Cables
Lengths (non-plenum): 6' | 10' | 20' | 40'
Lengths (plenum): 20' | 40'

Source Cables

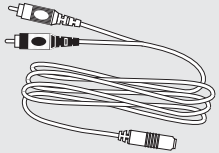


☐ Mono Cables, M-M
Length: 6'



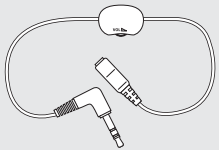
☐ Stereo Cables, M-M
Lengths: 3' | 20' | 50'

RCA Adapter



☐ RCA to 3.5 mm, M-F
Length: 6'

Volume Control



☐ In-line Volume Control, M-F

LANYARD KIT

The Orbiter includes a pre-built lanyard and spring-loaded cord lock for length adjustment.

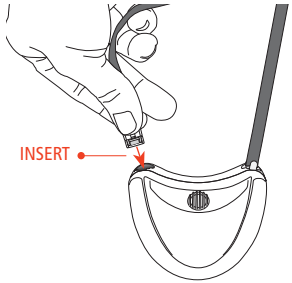
Insert clips into Orbiter

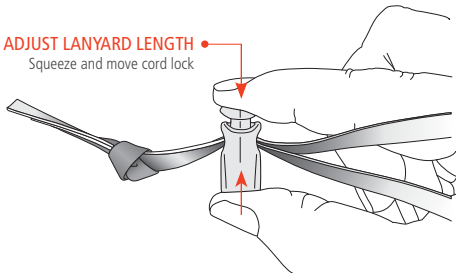
To install the lanyard, simply insert the clips into both sides of the Orbiter. The clips will lock into place. To remove, squeeze the clips and pull.

Adjustable spring-loaded cord lock

Once installed, the lanyard's length is adjusted by squeezing and moving the included cord lock. The microphone should rest approximately 4-6" away from the chin.

Diagrams





How to remove excess lanyard material

If desired, the lanyard can be shortened to remove excess lanyard material.

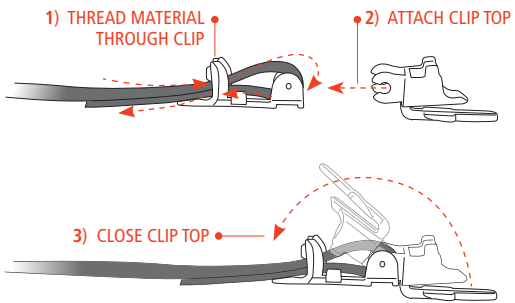
- Untie the lanyard material.
- Remove spring-loaded cord lock.
- Cut lanyard pieces to equal length.
- Reinstall spring-loaded cord lock.
- Tie off both ends of lanyard material.

How to attach lanyard clips

In the case that lanyard material is removed from the clips, please follow these instructions to reinstall.

- With clip pieces detached, thread lanyard material through bottom clip.
- Attach lanyard clip top hinge piece.
- Close clip and press together until it locks.
- Cut off any extra material as desired.

Diagrams



CHARGING THE TRANSMITTER

Using the transmitter charger

Prior to operating the Orbiter for the first time, please allow a couple hours to charge the transmitter. The Orbiter transmitter charges like a cell phone.

1. Plug charger into power outlet.
2. Connect charger to transmitter base.
3. Transmitter LED will illuminate when charging.
   - Green blinking – charging
   - Green steady – charged
4. Please allow a couple hours for full charge.

IMPORTANT

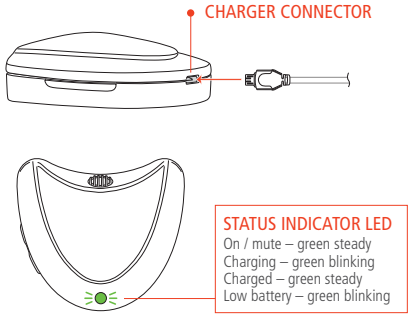
The Orbiter will not start up if the battery is insufficiently charged. Charge it for at least an hour prior to operation.

⚠ CAUTION

Observe the following safe operational temperature ranges:

Charge	0 °C / 32 °F to 45 °C / 113 °F
Storage (less than 90 days)	-20 °C / -4 °F to 35 °C / 95 °F

Diagrams


CHARGER CONNECTOR
STATUS INDICATOR LED
On / mute – green steady
Charging – green blinking
Charged – green steady
Low battery – green blinking

⚠ CAUTION

- Do not leave the transmitter connected to the charger for more than a week. It may cause the degradation of battery performance, such as a shortening of battery life.
- When charging the battery, do not use any battery charger not specified by Cetacea Sound.

Receiver location

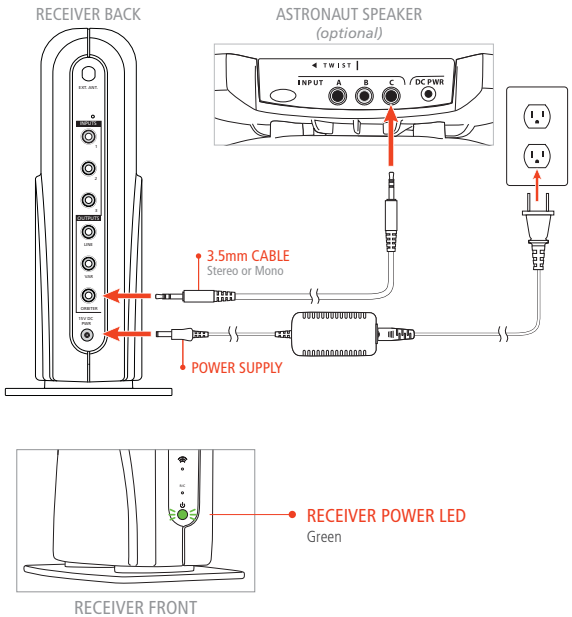
1. Position the receiver on a flat surface near an AC power source.
2. Ensure all connectors on the backside are free from obstruction.

Receiver connections

1. Connect 3.5 mm speaker cable to ORBITER OUTPUT.
2. Connect 3.5 mm speaker cable to amplifier/speaker.
3. Plug in desktop receiver power supply.
4. Green LED will illuminate to indicate that the desktop receiver is powered.

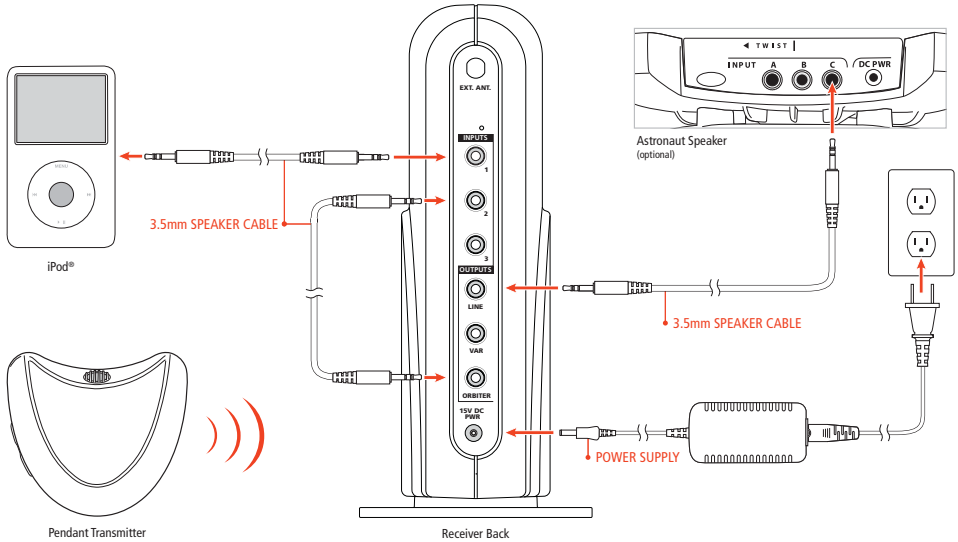
NOTE
For multimedia connection diagrams refer to pages 11-14.

Diagrams



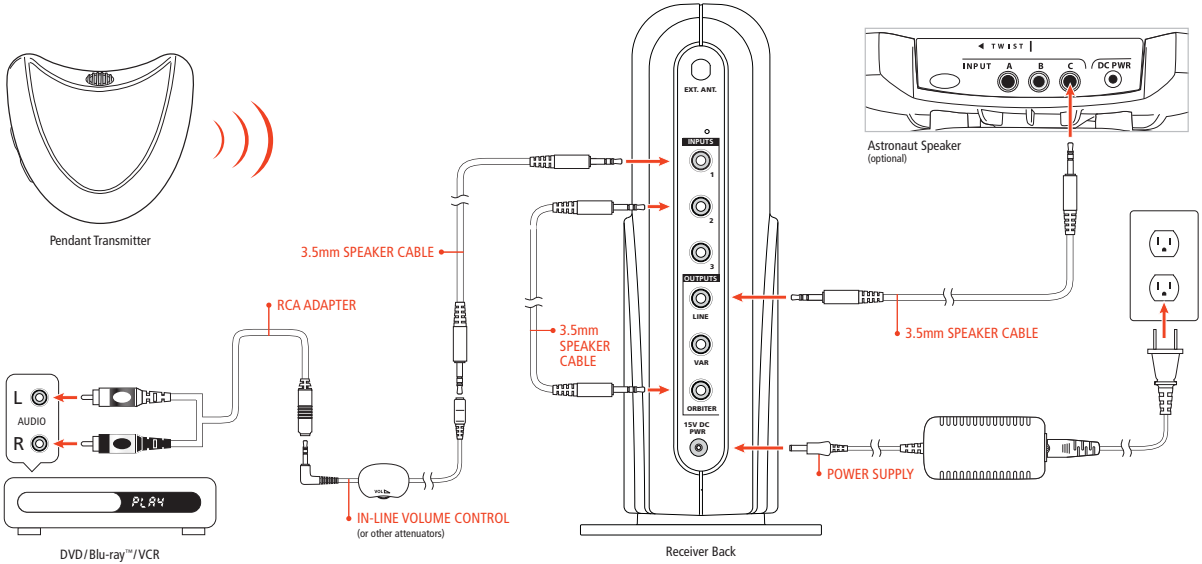
MULTIMEDIA CONNECTIONS

Orbiter and iPod® Connections



iPod® is a registered trademark of Apple Inc.

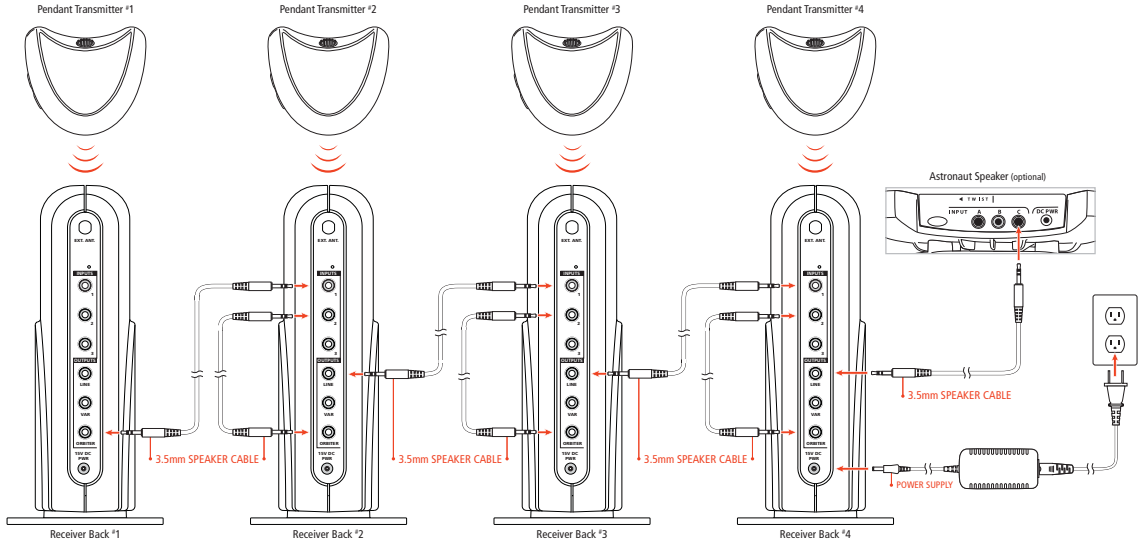
Orbiter and DVD/VHS Connections



MULTIPLE TRANSMITTERS

Using Multiple Transmitters & Receivers

The Orbiter system can daisy-chain together to allow for multiple Orbiter transmitters and receivers to be used with a single speaker system. Please refer to the below diagram for connection instructions.



Using the master control

The Orbiter transmitter control button (ON/OFF/MUTE) is multi-functional and located on the backside of the transmitter.

A. Click once for ON

B. Click again to MUTE

C. Click again to UNMUTE (etc.)

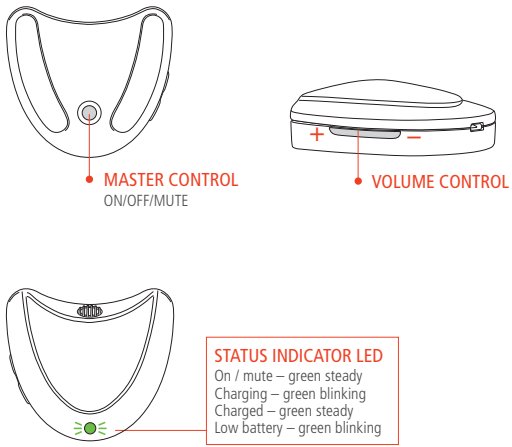
D. Turn OFF by pushing and holding for 4 seconds and release.

NOTE
The MASTER CONTROL button can be pressed repeatedly to cycle between MUTE and UNMUTE.

Using the volume control

This rocker-style button controls the volume level when pressed. A single click adjusts volume by one step; push and hold to scroll volume up or down. The transmitter volume will remain at its last setting when cycled between MUTE and UNMUTE.

Diagrams



USING THE LANYARD

The Orbiter includes a pre-built lanyard and spring-loaded cord lock to adjust its length.

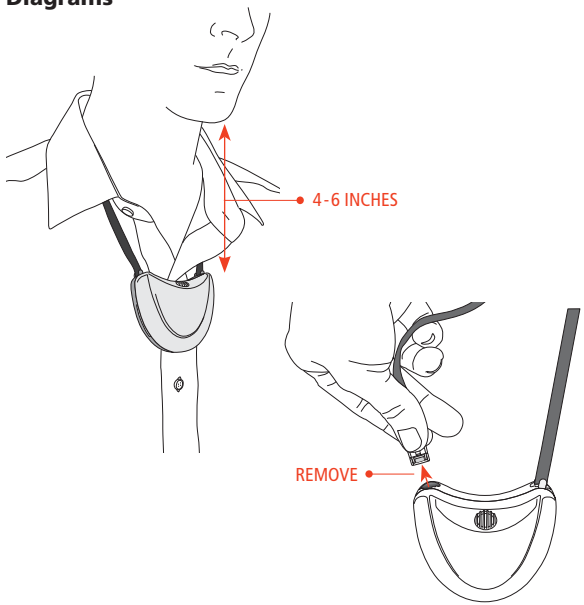
Wearing the lanyard

- With clips inserted, place lanyard over your head.
- Adjust length by using the cord lock.
- The microphone should be approximately 4-6" from the chin.

Removing the lanyard

1. Simply release one clip for the fastest removal.
2. Or, lengthen the lanyard by squeezing the cord lock. Remove lanyard over your head.

Diagrams

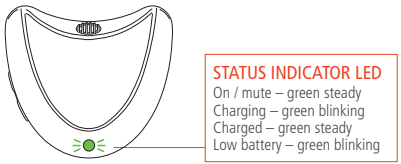


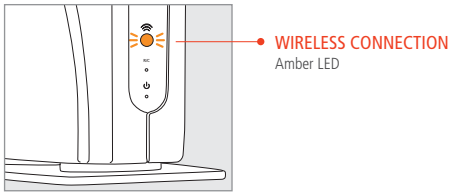
ESTABLISH A WIRELESS CONNECTION

Wireless transmitter/receiver connection

1. Ensure transmitter is charged.
2. Disconnect charger from transmitter.
3. Turn transmitter ON.
   - Click MASTER CONTROL
     Green LED will glow steady.
4. Check desktop receiver for wireless connection.
   - WIRELESS CONNECTION
     Amber LED will glow steady.

Diagrams





RECEIVER FRONT

PAIRING THE ORBITER SYSTEM

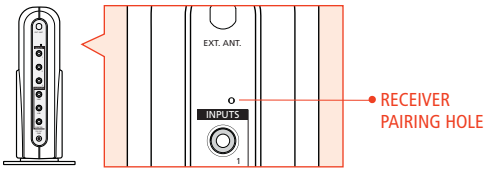
Orbiter pairing instructions

1. Make sure the Orbiter pendant transmitter has been properly charged and is **NOT** connected to the charger.
2. The transmitter and receiver must be ON in order to pair.

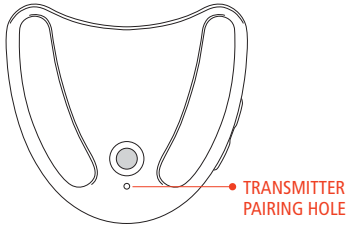
> **NOTE**
> We recommend that the receiver is not plugged into the speaker while pairing.

3. Straighten the end of a medium paper clip.

4. Insert the end of the paper clip approximately 1/16" into the pairing hole on the receiver. To prevent hardware damage use light pressure when inserting the paper clip. The receiver amber light will begin to flash indicating that it's in pairing mode.



5. Insert the end of the paper clip approximately ½" into the pairing hole on the transmitter. To prevent hardware damage use light pressure when inserting the paper clip. Successful pairing will result in a solid amber light on the front side of the receiver.



6. Receiver pairing mode lasts only a short time. If unsuccessful, repeat steps 4 and 5.

Using the transmitter

1. Once connected, the transmitter begins on MUTE.
2. UNMUTE transmitter.
   - Click MASTER CONTROL once.
3. Speak into microphone.

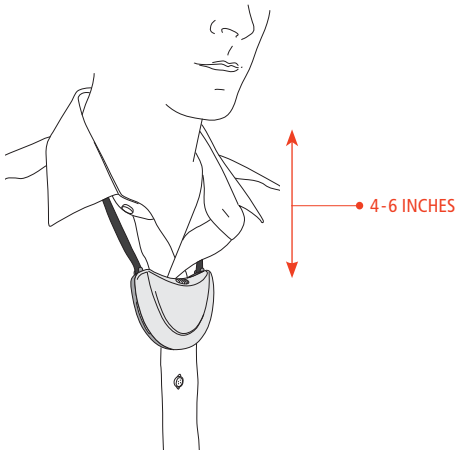
> **NOTE**
> There should be about 4-6" of space between the microphone and your chin.

4. Adjust VOLUME up and down by clicking or scrolling.
5. Test MUTE and UNMUTE by clicking the MASTER CONTROL button repeatedly.

Shut down

When finished operating the microphone, simply push and hold the MASTER CONTROL button for 4 seconds and release. Once disconnected, the desktop receiver amber LED will go out.

Diagrams



IMPORTANT

Read before connecting multimedia

Common Sources

The included Orbiter desktop receiver/mixer supports up to 3 separate source devices for added multimedia in the classroom. All inputs and outputs accept 3.5 mm stereo-mono connectors.

The receiver inputs and outputs can be connected to most of the following devices:

- DVD / VHS
- CD / iPod® / iPad®
- Voice Recorder
- Interactive Whiteboard
- Computers

Turn OFF Special Effects

When using a sound source, turn off all equalizer or compression algorithm effects commonly called “bass boost”, “surround sound”, “jazz”, etc. If connecting to a computer, make sure that the sound card software is properly set up for uncompressed and un-boosted stereo output. Use only the stereo output from DVD’s and personal computers. Most line and variable headphone jacks are also suitable sources.

Orbiter Inputs

The Orbiter receiver includes an on-board mixer. It is designed to send device signals to an amplified system like the Astronaut classroom audio speaker. Connect these inputs to line-level jacks only.

CAUTION

- Do not connect the input jacks A,B, or C to amplified sources. This may cause premature failure and a loss of warranty.
- The Orbiter output jack is variable. Do not connect this jack to "MIC" level inputs.

Tips for controlling feedback

The Orbiter, and all microphones for that matter, will experience feedback unless used with care. Feedback is caused by a variety of factors, including speaker and microphone placement, the room environment, and volume.

Volume

Set the appropriate volume level for your room with the help of a second person. High microphone volume is a common cause of feedback.

1. Stand as far away from the speaker as possible but close to the audience and adjust volume until it is loud enough for the audience to hear.
   - Have a second person determine appropriate loudness by standing or sitting in the audience location.

   NOTE
   The appropriate audience volume level may sound low to the person with the transmitter.

2. Lower volume if any sign of feedback is detected.

Speaker Placement

Microphone proximity to the speaker is a common cause of feedback. Speakers can easily be relocated with extension cables. Contact us for an extension cable kit.

Room Environment

Always walk the room to detect sensitive feedback areas. In some cases, these areas will be unavoidable due to the unique properties of the room. Avoid these areas during microphone use.

SAFETY PRECAUTIONS

Follow these instructions & use precautions

- Read this guide fully and follow all instructions.
- Save this guide nearby in an accessible location.
- Heed all cautions and warnings posted within this guide.
- Safeguard this equipment from high humidity.
- Do not use this equipment if ambient temperatures exceed 120 °F (48 °C)
- Refer all servicing to Cetacea Sound. Follow website instructions for tech support.

Pendant Transmitter

- Disconnect charger when transmitter is not in use for long periods of time. It may cause the degradation of battery performance, such as a shortening of battery life.
- When charging the battery, use only battery chargers approved by Cetacea Sound.
- Do not compress, throw or drop the transmitter. Abuse may lead to a short and result in heat generation, explosion or fire.
- Do not use or leave the transmitter near fire, heaters, inside an automobile in hot weather or under strong sunshine. Such conditions of high temperature may short the battery and result in heat generation, explosion or fire.

Desktop Receiver

- Disconnect power supply when not using the receiver for long periods of time (more than a week).
- Do not install near any heat sources like radiators or stoves.
- Never force anything into the openings or source inputs of the receiver.
- Protect the power cord from being walked on or pinched particularly at the plugs and receptacles.
- To reduce the risk of fire or electric shock, do not expose this device to rain or moisture, or place near objects filled with water.

NOTE

All literature can be found on our website. Please download an electronic copy of this guide for your records.

FCC and IC information

This device complies with Part 15 of the FCC Rules and RSS-210 of the IC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Limited warranty

Full 5-Years On All Components

Cetacea Sound Corp. warrants to the original purchaser that, if the product purchased from an authorized Cetacea Sound Dealer fails in normal use due to defect in materials or workmanship within five years of the date of the original purchase, Cetacea Sound Corp. or a designated authorized partner will, at its option, repair or replace the product without charge. Products repaired or replaced are warranted for the remainder of the original warranty period.

THIS LIMITED WARRANTY DOES NOT COVER defects caused by freight damage; abuse; inappropriate use; exposure to extreme temperatures, solvents or other liquids, or foreign particles or contaminates; modification; alteration; accident or casualty; malfunction resulting from the malfunction of other audio equipment; operation of the product in a manner contrary to the instructions accompanying the product; repair or service by anyone other than Cetacea Sound Corp. or a designated authorized partner; or poor sound quality or noise due to poor cable quality, installation or routing, power fluctuations, improper grounding, or failure to follow the published installation guidelines of the International Communications Industry Assoc. (ICIA).

ANY EXPRESS WARRANTY NOT PROVIDED IN THIS LIMITED WARRANTY STATEMENT, AND ANY REMEDY FOR BREACH OF CONTRACT THAT, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION OR OPERATION OF LAW, IS HEREBY EXCLUDED AND DISCLAIMED. IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR ANY PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. SOME STATES OR COUNTRIES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THIS LIMITATION MAY NOT APPLY TO YOU.

UNDER NO CIRCUMSTANCES SHALL CETACEA SOUND CORP. BE LIABLE TO PURCHASER OR ANY OTHER PERSON FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES, WHETHER ARISING OUT OF BREACH OF WARRANTY, BREACH OF CONTRACT OR OTHERWISE. SOME STATES OR COUNTRIES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

To obtain Warranty Service, the customer must contact Cetacea Sound if purchased in the USA or a designated authorized partner if purchased outside the country. For customers within the USA, follow the instructions shown on our website, and return the product to us at the address shown below with the Return Material Authorization number issued by Customer Service. All removal, installation, and shipping expenses are the responsibility of the purchaser.

This Warranty gives you specific legal rights, and you may also have other rights which vary between states and countries outside the USA.

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